

ABSTRACT

A woven fibrous article that generates heat upon application of electrical power has a woven fibrous body consisting of a set of non-conductive warp yarns and a set of non-conductive filling or weft yarns. One of the set of non-conductive warp yarns and the set of non-conductive filling or weft yarns, in one or more first regions, consists of relatively more coarse yarns and in one or more second regions consists of relatively more fine yarns with electrical conductor elements extending generally along the second regions of the woven fibrous body to connect the plurality of spaced apart electrical conductance heating elements in a parallel electrical circuit to a source of electrical power. The other of the set of non-conductive warp yarns and the set of non-conductive filling or weft yarns, in the one or more first regions and in the one or more second regions, consists of relatively more fine yarns, with a plurality of spaced apart electrical conductance heating elements in the form of conductive elements joined in the woven fibrous body with the other of the set of non-conductive warp yarns and the set of non-conductive filling or weft yarns to extend generally between opposite the second regions of the woven fibrous body. In one embodiment, fleece may be formed on one or both surfaces of the woven fibrous body by finishing fibers of the relatively more coarse yarns in the one or more first regions of the set of non-conductive warp yarns or non-conductive filling or weft yarns, in a manner to avoid damage to electrical conductivity performance of the conductive elements joined with the set of yarns of the woven fibrous body. A method of forming a woven fibrous article of the invention is also described.

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